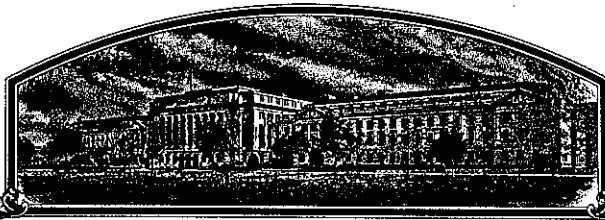


No.

8500157



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Asgrow Seed Company**

Whereas, THERE HAS BEEN PRESENTED TO THE

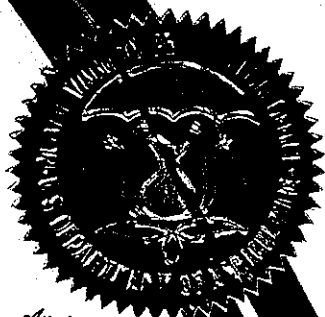
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (AT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A1214'



Attest:

*Kenneth M. ...*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this 30th day of April in the year of our Lord one thousand nine hundred and eighty-six.

*Richard E. Lyng*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S) Asgrow Seed Company		2. TEMPORARY DESIGNATION XP1114		3. VARIETY NAME A1214	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 7000 Portage Road (9620-190-25) Kalamazoo, MI 49001		5. PHONE (Include area code) (616) 385-6605		FOR OFFICIAL USE ONLY PVPO NUMBER 8500157	
6. GENUS AND SPECIES NAME Glycine Max		7. FAMILY NAME (Botanical) Leguminosae		FILING DATE 5/29/85 TIME 11:00 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Soybean		9. DATE OF DETERMINATION September 1978		AMOUNT FOR FILING \$ 1,800. DATE 5/29/85	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				AMOUNT FOR CERTIFICATE \$ 200. DATE 3/27/86	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware				12. DATE OF INCORPORATION 1968	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Mr. John A. Batcha (9620-190-25) Asgrow Seed Company Gull Road, Building 190 Kalamazoo, MI 49001 PHONE (Include area code): (616) 385-6605					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement.					
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)					
d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety.					
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT <i>John A. Batcha</i>				DATE April 26, 1985	
SIGNATURE OF APPLICANT				DATE	

EXHIBIT A

Origin and Breeding History of A1214

- 1975 Cross was made in July, 1975, at Ames, Iowa.  
PARENTS: Evans\*HP20-20
- 1975-76 (Winter) F<sub>1</sub> generation grown at Delray Beach, Florida.
- 1976 F<sub>2</sub> generation grown at Ames, Iowa.
- 1976-77 (Winter) F<sub>3</sub> and F<sub>4</sub> generation grown at Delray Beach, Florida.
- 1977 F<sub>5</sub> generation grown at Ames, Iowa. Two hundred plants were selected from the bulk population and threshed individually.
- 1978 Progeny row D75229-D78-20314 was selected for its uniformity and maturity. This row was harvested in bulk and seeds were checked and verified for uniform seed coat luster and hilum color.
- It was in September, 1978, that D75229-D78-20314 was determined to be a stable and unique line.
- 1979 D75229-D78-20314 was entered in the Preliminary yield tests which were grown at two locations in Iowa. It produced uniform stands and was selected for its high yield and early maturity.
- 1980 D75229-D78-20314 was entered in the Strain S101 yield tests which were grown at 6 locations in Iowa and Minnesota.
- 1981 D75229-D78-20314 was entered in the Strain S100 yield tests which were grown at 6 locations in Iowa and Minnesota.
- One hundred F<sub>9</sub> plants were pulled in October, 1981, at Ames, Iowa.
- D75229-D78-20314 was assigned the designation, X1114.
- 1982 X1114 was entered in the Variety V100 yield tests which were grown at 8 locations in Iowa, Illinois and Minnesota.
- One hundred plant rows were grown at Ames, Iowa. Uniform plant rows were harvested and checked and verified for dull seed coat luster and yellow hila. Forty plant rows were bulked to form a breeder seed lot.
- X1114 was nominated for pilot production and assigned the designation, XP1114.

## EXHIBIT A (cont.)

1983            XP1114 was entered in the Variety V090 yield tests which were grown at 3 locations in Minnesota and Ontario, Canada.

Eighty pounds of breeder seed of XP1114 was grown on 2 acres at Redwood Falls, Minnesota, in 1983.

1984            XP1114 was entered in the Variety V090 yield tests which were grown at 7 locations in Minnesota.

Foundation seed of XP1114 was grown near Clarion, Iowa.

XP1114 was nominated for release and full production and assigned the designation, A1214.

Trial evaluations in 1983 and 1984 indicate that A1214 is uniform and stable. As with other soybean varieties, variants can occur for almost any characteristic during the course of repeated sexual reproduction.

Asgrow Seed Company  
PVP Application A1214 Soybean  
April, 1985

EXHIBIT B

Novelty Statement Concerning A1214 Soybean

To our knowledge the soybean varieties that most closely resemble A1214 are Evans, Dawson and Simpson. Characteristics which differentiate A1214, but are not necessarily restricted to, the following:

1. Flower Color:

A1214 = White  
Evans = White  
Dawson = Purple  
Simpson = Purple

2. Pod Wall Color:

A1214 = Tan  
Evans = Brown  
Dawson = Brown  
Simpson = Brown

3. Hilum Color:

A1214 = Yellow  
Evans = Yellow  
Dawson = Yellow  
Simpson = Buff

4. Reactions to Race 1 of Phytophthora megasperma Drechs. f. sp. glycinea:

A1214 = Susceptible  
Evans = Resistant  
Dawson = Resistant  
Simpson = Resistant

5. Number of days maturity:

A1214 = 122  
Evans = 117  
Dawson = 118  
Simpson = 120  
LSD .05 = 1

A1214 is an early Group I maturity variety that has higher yields than EVans, Dawson or Simpson.

OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Asgrow Seed Company	TEMPORARY DESIGNATION XP1114	VARIETY NAME A1214
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 9620-190-25 Gull Road, Bldg. 190 Kalamazoo, MI 49001		FOR OFFICIAL USE ONLY PVPO NUMBER 8500157

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,   ).

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)  
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

1 = Yellow      2 = Green      3 = Brown      4 = Black      5 = Other (Specify) \_\_\_\_\_

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')      2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

1 = Buff      2 = Yellow      3 = Brown      4 = Gray      5 = Imperfect Black      6 = Black      7 = Other (Specify) \_\_\_\_\_

6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow      2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low      2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1<sup>a</sup>)      2 = Type B (SP1<sup>b</sup>)

9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')      2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')  
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')  
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

1 = Lanceolate      2 = Oval      3 = Ovate      4 = Other (Specify) \_\_\_\_\_

## 11. LEAFLET SIZE:

☐ 21 = Small ('Amsoy 71'; 'A5312')  
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

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## 12. LEAF COLOR:

☐ 21 = Light Green ('Weber'; 'York')  
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

## 13. FLOWER COLOR:

☐ 1

1 = White

2 = Purple

3 = White with purple throat

## 14. POD COLOR:

☐ 1

1 = Tan

2 = Brown

3 = Black

## 15. PLANT PUBESCENCE COLOR:

☐ 1

1 = Gray

2 = Brown (Tawny)

## 16. PLANT TYPES:

☐ 21 = Slender ('Essex'; 'Amsoy 71')  
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

## 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

## 18. MATURITY GROUP:

☐ 0 ☐ 41 = 000  
9 = VI2 = 00  
10 = VII3 = 0  
11 = VIII4 = I  
12 = IX5 = II  
13 = X

6 = III

7 = IV

8 = V

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

## BACTERIAL DISEASES:

☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☐ 0Bacterial Blight (*Pseudomonas glycinea*)☐ 0Wildfire (*Pseudomonas tabaci*)

## FUNGAL DISEASES:

☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)☐ 0

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

Race 5

☐

Other (Specify)

☐ 0Target Spot (*Corynespora cassiicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 1Powdery Mildew (*Microsphaera diffusa*)☐ 1Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

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19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

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FUNGAL DISEASES: (Continued)

☐ 0 Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)

☐ 0 Purple Seed Stain (*Cercospora kikuchii*)

☐ 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)

Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)

☐ 1 Race 1 ☐ 1 Race 2 ☐ 1 Race 3 ☐ 1 Race 4 ☐ 1 Race 5 ☐ 1 Race 6 ☐ 1 Race 7

☐ 1 Race 8 ☐ 1 Race 9 ☐ Other (Specify) \_\_\_\_\_

VIRAL DISEASES:

☐ 0 Bud Blight (Tobacco Ringspot Virus)

☐ 0 Yellow Mosaic (Bean Yellow Mosaic Virus)

☐ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)

☐ 0 Pod Mottle (Bean Pod Mottle Virus)

☐ 0 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode (*Heterodera glycines*)

☐ 0 Race 1 ☐ 0 Race 2 ☐ 1 Race 3 ☐ 0 Race 4 ☐ Other (Specify) \_\_\_\_\_

☐ 0 Lance Nematode (*Hoplolaimus Colombus*)

☐ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)

☐ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)

☐ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)

☐ 0 Reniform Nematode (*Rotylenchulus reniformis*)

☐ 0 OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ 1 Iron Chlorosis on Calcareous Soil

☐ Other (Specify) \_\_\_\_\_

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐ 0 Mexican Bean Beetle (*Epilachna varivestis*)

☐ 0 Potato Leaf Hopper (*Empoasca fabae*)

☐ Other (Specify) \_\_\_\_\_

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	Evans	Seed Coat Luster	Evans
Leaf Shape	Evans	Seed Size	Evans
Leaf Color	Evans	Seed Shape	Evans
Leaf Size	Evans	Seedling Pigmentation	Evans

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## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
A1214 Submitted	122	2.0	91	7	10	43.5	20.2	15.6	
Simpson Name of Similar Variety	120	1.3	75	6	9	43.8	19.9	14.3	

## PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

Asgrow Seed Company  
PVP Application - Soybean A1214  
April 26, 1985

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EXHIBIT E

Statement of the Basis of Applicant's Ownership

A1214 was originated and developed by John A. Schillinger and Alan K. Walker, Asgrow Plant Breeders. By agreement between employee and Asgrow Seed Company, all rights to any invention, discovery, or development made by an employee are assigned to the Company. No rights to such invention, discovery, or development are retained by the employee.

mga  
b:A1214ExE